

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: 1797

Examiner: Ellen M. McAvoy

In re Application of: Coleman et al.

Serial No. 09/108,447

Filed: July 1, 1998

For: HIGH STABILITY FUEL COMPOSITIONS

DECLARATION OF DR. RICHARD ELLIS

Dear Sir:

I, Dr. Richard Ellis, hereby declare and state as follows:

1. I currently reside in Atlanta, Georgia.
2. I received my Doctorate in Chemistry from the University of Cincinnati in 1972, a Masters Degree in Chemistry from Marshall University from 1968, and a Bachelor's Degree in Chemistry from Marshall University in 1964.
3. I am a Consultant in the Emulsified Fuel Industry, and provide services for EcoEnergy Solutions, assignee of the present invention.
4. The order in which the reactants are added to a fuel composition can be crucial in determining the products that are produced. A simple demonstration is the use of a collector and frother in a mineral flotation operation. If the collector is added first then the frother, the mineral can be floated successfully. If the frother is added prior to the collector the flotation will not occur as the surface active sites required by the collector on the mineral surface will have been occupied by the frother.

This is also true in the present situation. If all of the ingredients for the formation of the additive (including unreacted Diels-Alder adducts and alkanolamine) are mixed together as taught by Dubin the neutralization reaction between the Diels-Alder adducts and the

alkanolamines probably will not occur as there is no way to insure contact between the reactants. This result is necessary in the Dubin patent as the stabilizing agent needs to be oil soluble. The neutralization taking place first and forming a water soluble salt allows the stabilizing agent to be dissolved in the water.

5. This brings us to the second issue. The examiner clearly states that the teaching in Dubin of additives used for water continuous emulsions is more than adequate to suggest their use in an oil continuous emulsion. This is patently untrue. The additive must be able to dissolve or disperse in the proper phase in order to make a stable emulsion. Thus, from above, the Diels-Alder adducts are neutralized to make them water soluble as claimed in the above-identified patent application (oil continuous phase) while in Dubin's patent they need to be oil soluble (water continuous phase) to form a stable emulsion.

I further declare that all statements made of my own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and may jeopardize the validity or enforceability of a patent issued from this patent application.

5-5-09
Date

Richard Ellis
Dr Richard Ellis